

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-022124**Date Inspected:** 22-Mar-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1630**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** Fred Von Hoff**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower Grillage**Summary of Items Observed:**

This Quality Assurance (QA) Inspector, Craig Hager was on site at the job site between the times noted above.

This QA Inspector was on site to randomly observe Quality Control (QC) personnel perform Non-Destructive Testing (NDT) and monitor American Bridge/Fluor (ABF) welding operations. This Quality Assurance (QA) Inspector, Craig Hager was on site between the times noted above.

South Tower leg:

This QA Inspector observed ABF welding personnel Rick Clayborn (#2773) had start the repair excavation on Complete Joint Penetration (CJP) weld TG-S-P7-P8. QC Inspector Mike Johnson informed this QA Inspector he had completed his inspection of 100% of the weld length and had determined a defect was present outside the original 25% area of inspection and that ABF welding personnel Rick Claybon has elected to incorporate it into one single excavation. This QA Inspector observed QC Inspector Fred Von Hoff inform welding personnel Rick Clayborn (#2773) additional grinding was required to remove all of the carbon deposits from the carbon arcing process. Later QC Inspector Fred Von Hoff informed this QA Inspector he had performed and accepted the final visual inspection of the excavation. This QA Inspector performed a visual verification observing the final excavation was approximately 400 mm long, 30 mm wide and 28 mm deep. This QA Inspector randomly observed as QC Inspector Fred Von Hoff performed Magnetic Particle Testing (MT) to verify sound metal prior to the start of welding. This QA Inspector observed QC Inspector Fred Von Hoff monitoring the work; checking preheat using an electronic temperature gauge and the welding parameters prior to welding. This QA Inspector randomly observe d the repair welding and observed that after completing approximately 90% of the welding ABF welding personnel Rick Clayborn (#2773) had been pulled from this job to start a repair excavation on a CJP weld

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in the West Tower leg. This QA Inspector observed ABF welding personnel Gil Peralta (#9453) replaced welding personnel Rick Clayborne and completed the repair welding by the end of the shift this date.

East Tower leg:

Production welding completed, QC inspections completed and QA verification inspections completed.

West Tower leg:

QC Inspector Fred Von Hoff informed this QA Inspector he had completed and accepted the visual and Magnetic Particle Testing (MT) on the Complete Joint Penetration (CJP), Partial Joint Penetration (PJP) and Fillet welds. This QA Inspector performed a visual verification and random MT verification on each weld for approximately 10% of the weld length. See Magnetic Particle Testing inspection report (TL-6028) this date for further details. This QA Inspector observed several areas of excessive weld reinforcement and contour and notified QC Inspector Fred Von Hoff of the observations. QC Inspector Fred Von Hoff informed this QA Inspector later the issues had been corrected, this QA Inspector visually verified these areas had been corrected. At approximately 1330 hours this date this QA Inspector observed QC Inspector Mike Johnson started Ultrasonic Testing (UT) of the CJP welds.

This QA Inspector returned approximately 30 minutes later to start UT verification inspections and observed that ABF welding personnel Rick Clayborne (#2773) was performing carbon arcing at CJP weld joint TG-W-P2-P3. QC Inspector Mike Johnson informed this QA Inspector he had completed his UT, accepting all the CJP welds except for TG-W-P2-P3 and that ABF welding personnel had started the repair process. By the end of the shift this date the repair excavation at TG-W-P2-P3 was approximately 90% done.

North Tower leg:

This QA Inspector randomly observed ABF welding personnel Sal Sandoval (#2202) performing SMAW on the last of the CJP weld and that welding was completed at approximately 0930 hours this date. This QA Inspector observed ABF welding personnel Gil Peralta (#9453) performing SMAW on the various fillet welds. By the end of the shift this date the fillet welds were approximately 90% complete.

North and South Suspender Brackets:

This QA Inspector was informed the 40 mm hold back on the 8 mm fillet welds attaching the top bearing plates was acceptable per Caltrans Engineer Mark Woods via person to person conversation with Caltrans Engineer Saman Soheili.

This QA Inspector was informed by QC Inspector Fred Von Hoff the welding parameters for the personnel noted above were within the required heat input range in the Welding Procedure Specifications (WPS) ABF-WPS-D15-1162-4 for the PJP welds, ABF-WPS-D15-1042A-4 for CJP welds and ABF-WPS-D15-F1206 for Fillet welds. Note the welding parameters are the same for all three procedures. This QA Inspector randomly observed the amperages and voltages of ABF welding personnel noted above and they appeared to be within the ranges in the WPS. This QA Inspector observed that both 3.2 mm and 4.0 mm diameter E9018H4R electrodes were being used and stored in separate heated storage containers. This QA Inspector also observed the 1-hour exposure limit for the electrodes appeared to be monitored and adhered to.

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Summary of Conversations:

This QA Inspector had general conversations with American Bridge/Fluor (ABF) and Caltrans personnel during this shift. Except as described above there were no notable conversations.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Hager,Craig	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer
